

Summary of Cancer Incidence and Mortality for Zip Code 29841 (Beech Island, SC)

Cancer Incidence in Zip Code 29841

The first step in the analysis of cancer data for zip code 29841 was to look at the number of new cancer cases diagnosed in the zip code and compare this to the number of cancer cases expected (see Table 1). This first step determines if there is anything unusual with cancer patterns in the area. The number of "expected" cancer cases is calculated by using South Carolina cancer rates and applying them to the population of the zip code.

Table 1 shows what types of cancer occurred in zip code 29841 from 1996-2000, and how many cancer cases were expected. Overall, there were fewer cases of cancer than expected. A total of 642 new cases of cancer occurred in the zip code, while 703 cases were expected. The most common types of cancer were lung, female breast, colon/rectum, and prostate cancers. These four types of cancer are also the most common cancers occurring across all of South Carolina.

The analysis did not reveal any specific types of cancer where the number of new cases that occurred was significantly higher than expected.

Cancer Deaths in Zip Code 29841

To assess cancer deaths in this zip code, cancer mortality data from 1997-2001 were used. The same process used to analyze new cancer cases was also used to analyze cancer deaths. Table 2 shows the number of cancer deaths that occurred and the number expected in the zip code. A total of 272 cancer deaths occurred in this zip code, while 333 deaths were expected. Therefore, fewer cancer deaths occurred than expected.

The analysis did not reveal any specific types of cancer where the number of cancer deaths that occurred was significantly higher than expected.

Conclusions

To summarize, fewer cancer cases and deaths occurred in zip code 29841 than expected. There were no specific cancer sites significantly elevated either in cancer incidence or cancer mortality.

In order for a true cancer cluster to exist, the number of cancers occurring must be more than would be expected by chance. Along with statistical testing, there are several other criteria that determine whether a true cancer cluster exists. First, a cancer cluster would more likely involve rarer types of cancer rather than more common cancers like breast or lung cancers. Also, a cancer cluster would occur with one specific type of cancer rather than having excesses in several different types of cancer.

Taking all these criteria into consideration, there is no evidence of cancer clustering or of cancers resulting from environmental exposures in zip code 29841.

For questions about this report, please contact Laura Sanders at the SC Central Cancer Registry.

Report provided by:

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Information on cancer incidence provided by the SC Central Cancer Registry, Office of Public Health Statistics and Information Services, SC Dept. of Health and Environmental Control.

Information on cancer mortality provided by the Division of Vital Records and the Division of Biostatistics, SC Dept. of Health and Environmental Control.

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Table 1. Analysis of New Cancer Cases in Zip Code 29841, 1996-2000

Site	Observed No. of Cases	Expected No. of Cases	Observed/Expected	Chi-SquareTest*
Lung/Bronchus	111	111.2	1.00	0.00
Breast (Female)	109	105.1	1.04	0.15
Colon/Rectum	91	81.6	1.11	1.07
Prostate	62	113.7	0.55	23.50
Non-Hodgkin Lymphoma	29	23.0	1.26	1.57
Melanoma	22	23.8	0.92	0.14
Oral/Pharynx	21	19.9	1.05	0.06
Uterus	21	17.3	1.22	0.81
Kidney/Renal Pelvis	18	17.7	1.02	0.00
Leukemia	16	13.7	1.17	0.37
Bladder	13	28.1	0.46	8.09
Pancreas	12	16.0	0.75	0.98
Brain/CNS	10	9.5	1.05	0.02
Larynx	7	8.6	0.82	0.29
Multiple Myeloma	7	7.9	0.88	0.11
Thyroid	7	7.3	0.96	0.01
Ovary	6	11.7	0.51	2.79
Stomach	4	11.2	0.36	4.64
Esophagus	4	9.6	0.42	3.24
Cervix	3	9.8	0.31	4.70
Liver	2	5.0	0.40	1.78
Unknown/III-Defined	28	NA	NA	NA
All Sites	642	703.0	0.91	5.29

Excludes in situ cases of cancer to allow for comparison.

Cancer sites with less than 5 cases of cancer expected are not analyzed due to the unreliability of statistical tests based on small numbers.

*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of cases is significantly different from the expected number of cases.

Prepared by: SC Central Cancer Registry, Office of Public Health Statistics and Information Services, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201

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Table 2. Analysis of Cancer Deaths in Zip Code 29841, 1997-2001

Site	<u>Observed No. of Deaths</u>	<u>Expected No. of Deaths</u>	<u>Observed/Expected</u>	<u>Chi-SquareTest*</u>
Lung/Bronchus	66	97.2	0.68	10.02
Colon/Rectum	33	33.0	1.00	0.00
Breast (Female)	28	24.6	1.14	0.48
Prostate	12	23.0	0.52	5.25
Pancreas	8	18.4	0.44	5.84
Non-Hodgkins Lymphoma	7	12.1	0.58	2.13
Leukemia	4	11.8	0.34	5.15
Stomach	3	8.4	0.36	3.50
Brain/CNS	11	8.3	1.32	0.86
Esophagus	5	8.0	0.62	1.13
Ovary	7	7.7	0.91	0.07
Multiple Myeloma	5	7.7	0.65	0.96
Kidney/Renal Pelvis	3	6.8	0.44	2.10
Bladder	5	6.4	0.78	0.30
Liver	3	6.4	0.47	1.78
Oral/Pharynx	6	6.3	0.96	0.01
Unknown/III-Defined	32	NA	NA	NA
All Sites	272	332.8	0.82	11.10

Cancer sites with less than 5 cancer deaths expected are not analyzed due to the unreliability of statistical tests based on small numbers.

*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of deaths is significantly different from the expected number of deaths.

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